REMARKS

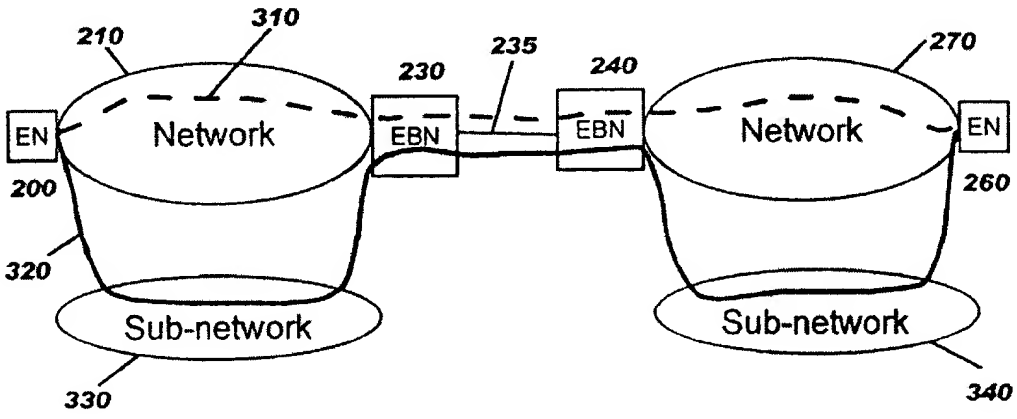
The Applicants appreciate the thorough examination of the present application that is reflected in the Final Official Action. Applicants respectfully submit that all of the pending claims are patentable for at least the reasons that will now be explained.

Independent Claims 1, 4, 5, and 8 are Not Anticipated by Kawakami

Independent Claims 1, 4, 5, and 8 stand rejected under 35 U.S.C. Sec. 102(e) as anticipated by U.S. Patent Application Publication No. 2001/0044842 to Kawakami (hereinafter "Kawakami").

The Specification explains with regard to FIG. 3 (shown below) that, when data is routed through networks in a conventional manner, a resulting "data transmission path 320 may not bypass the [extended border nodes] EBNs 230, 240 through which [a] location protocol traversed [, and that] this is so even if underlying networks 330 and 340 are the same underlying network, such as the public Internet or other commonly addressable collection of nodes and links." (Specification, Page 10, lines 5-8). It further explains that, "as a result, the data transmission path 320 is not truly optimized in many cases." (Specification, Page 10, lines 8-9).

FIG. 3 OF PRESENT APPLICATION



Claims 1-10 are directed to improving connecting among topology subnets. In particular, the Specification explains that in accordance with some embodiments of the present invention, "data [can be routed] through networks which are connected to a common underlying network or connection network which extends beyond the individual topology subnets." (Specification, Page 19, lines 11-14). It also explains that "[t]his technique adheres to the topology isolation requirement of each network, yet enables the data transmission path to bypass EBNs through which the location protocol traveled, providing optimized data transmission paths which may in many cases be shorter than the data transmission paths which are available using prior art techniques." (Specification, Page 19, lines 14-17).

In particular, independent Claim 1 recites (emphasis added):

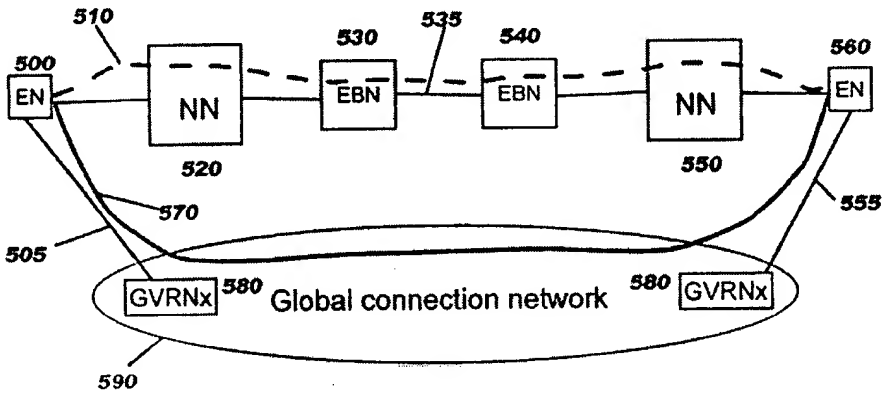
> 1. (Previously Presented) A method of improving connectivity among topology subnets using a common connection network, comprising:
>
> determining, by a border node located at a border of a particular one of the topology subnets, one or more links between the border node and a neighboring border node located at the border of a different one of the topology subnets, wherein a first session endpoint resides in the particular one of the topology subnets and has connectivity to a global virtual routing node ("GVRN");
>
> creating a list of the determined links;
>
> determining that the first session endpoint has connectivity to the GVRN and adding link information to the list to represent the determined connectivity of the first session endpoint to the GVRN; and
>
> forwarding the list to the neighboring border node.

Accordingly, a border node, that is located at a border of a topology subnet, determines one or more links between the border node and a neighboring border node located at the border of a different one of the topology subnets. A list of the determined links is then created. A determination is made that a first session endpoint residing in the topology subnet has connectivity to a global virtual routing node ("GVRN"), and link information is added to the list to represent the determined connectivity of the first session endpoint to the GVRN. The list is then forwarded to the neighboring border node.

For example, with reference to FIG. 5 (shown below) of the present application, because the endpoints 500 and 560 are connected to the GVRN 590 and such connectivity is determined,

data may be routed between the endpoints 500 and 560 through EBNs 540 and 540 (illustrated by a dashed line path), or it may be routed through GVRN 580 (illustrated by a solid line path) and associated global connection network 590.

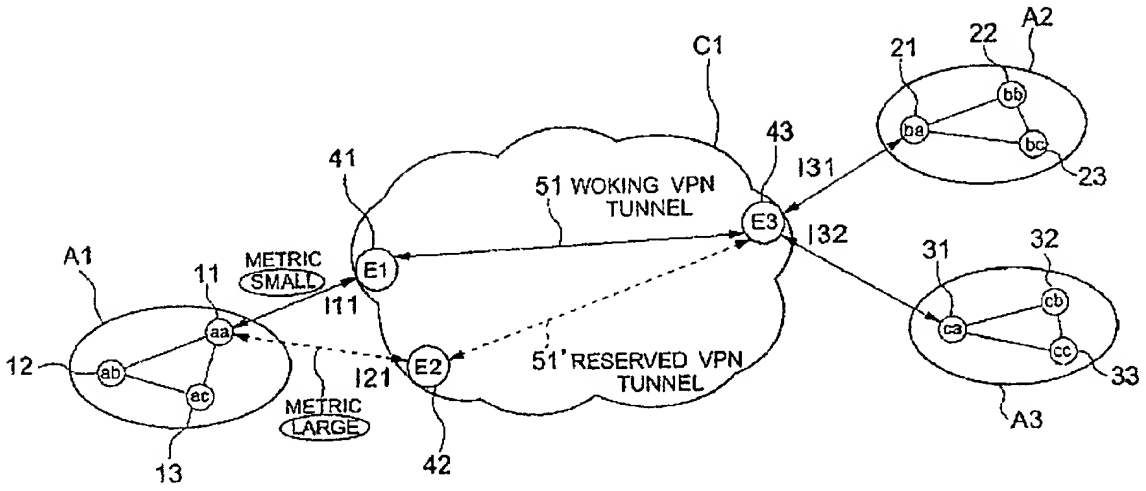
FIG. 5 OF PRESENT APPLICATION



In rejecting Claim 1, the Final Office Action contends on pages 2-3 that Kawakami (paragraphs 55-76 and FIGS. 1-8) discloses that a first session endpoint is determined to reside in a topology subnet that has connectivity to a GVRN, that link information is added to a list of links that have been determined between a border node and neighboring border nodes on different topology subnets, and that the list is forwarded to the neighboring border nodes. However, Applicants submit that Kawakami is even less relevant to the recitations of Claim 1 then what has already been described and shown (FIG. 3 above) by the present application as a conventional method of determining connectivity among topology subnets and which has also been distinguished therefrom.

In particular, Kawakami illustrates in FIG. 2, shown below, and discusses in the paragraphs relied upon by the Final Office Action that a communication system includes three customer networks A1, A2, A3 that are interconnected by a single provider network C1.

FIG. 2 of Kawakami



Applicants acknowledge that the VPNs of Kawakami appear to be analogous to the recitation in Claim 1 of "topology subnets", and that the VR table shown in FIG. 4 of Kawakami appear to be analogous to the recitation in Claim 1 of "determining, by a border node located at a border of a particular one of the topology subnets, one or more links between the border node and a neighboring border node located at the border of a different one of the topology subnets" and "determining a list of the determined links." However, Kawakami appears to be directed to finding alternate paths between a customer node 11 in a customer network A1 through alternate edge nodes 41,42 in the same provider network C1 to a customer node in one of two other customer networks A2,A3.

Kawakami does not appear to describe that a communication system includes a GVRN. Accordingly, Kawakami also does not appear to describe that a determination is made as to whether a session endpoint has connectivity to a GVRN and, when it does, that such link information that represents the determined connectivity of the session endpoint to the GVRN is added to the VR table of Kawakami. Moreover, because Kawakami does not disclose adding such GVRN link information to the VR table, it cannot disclose that a VR table with that added GVRN information is forwarded to neighboring nodes.

For at least these reasons, Applicants respectfully submit that Claim 1 is not anticipated by Kawakami.

Independent Claims 4, 5, 8 include analogous recitations to Claim 1, and are submitted to not be anticipated by Kawakami for at least the reasons provided above.

Dependent Claims 2-3, 6-7, and 9-10 are patentable at least per the patentability of the independent claims from which they depend. Moreover, Applicants submit that these claims provide further bases for patentability, as will now be explained below.

Dependent Claims 2, 6, and 9 Are Patentable Over Kawakami

Dependent Claims 2, 6, and 9 stand rejected under 35 U.S.C. Sec. 102(e) as anticipated by Kawakami.

Dependent Claim 2 recites:

> 2. (Currently Amended) The method according to Claim 1, further comprising:
> receiving, at the neighboring border node, the list;
> determining whether a second session endpoint, which resides in the different one of the topology subnets, has connectivity to the GVRN or to another GVRN, and, when the second session endpoint has connectivity to the GVRN or to another GVRN, adding link information to the list to represent the determined connectivity; and
> using the list to select a data transmission path between the first session endpoint and the second session endpoint.

Accordingly, Claim 2 recites that the neighboring border node receives the list of links, which includes the determined connectivity of the first session endpoint to the GVRN. A determination is made as to whether a second session endpoint, which resides in the different one of the topology subnets, has connectivity to the GVRN or to another GVRN. When the second session endpoint has connectivity to the GVRN or to another GVRN, that determined connectivity is added as link information to the list.

In rejecting Claim 2, the Final Office Action contends that Kawakami discloses each and every one of the claim recitations at paragraphs 19-31 and 61-64. However, as explained above, Kawakami discloses that all customer nodes within customer networks A1,A2,A3 are interconnected through the same single provider network C1. Nowhere in the cited paragraphs of Kawakami does it disclose that a determination is made as to whether a second session

endpoint residing in a different topology subnet from a first session endpoint has connectivity to the same GVRN as the first session endpoint or to another GVRN. Accordingly, Kawakami does not disclose that link information that represents the determined connected can be added to a list, such as the VR table of Kawakami.

For at least these reasons, Applicants respectfully submit that Claim 2 is not anticipated by Kawakami.

Claims 6 and 9 include analogous recitations to Claim 2, and are submitted to not be anticipated by Kawakami for at least the reasons provided above.

Dependent Claims 3, 7, and 10 Are Patentable Over Kawakami in view of Iwata

Dependent Claims 3, 7, and 10 stand rejected under 35 U.S.C. Sec. 103(a) as anticipated by Kawakami in view of U.S. Patent No. 6,026,077 to Iwata.

Claim 3 recites:

> 3. (Currently Amended) The method according to Claim 2, wherein using the list to select a data transmission path further comprises checking to see if both the first session endpoint and the second session endpoint have connectivity to a common GVRN, and, when both the first session endpoint and the second session endpoint have connectivity to a single GVRN, determining whether selecting the common GVRN as a node in the data transmission path results in an optimal data transmission path.

Accordingly, the list is used to select a data transmission path by checking to see if both the first session endpoint and the second session endpoint have connectivity to a common GVRN, and, when both the first session endpoint and the second session endpoint have connectivity to a single GVRN, a determination is made as to whether selecting the common GVRN as a node in the data transmission path results in an optimal data transmission path.

As explained above, Kawakami does not appear to disclose that a determination is made as to whether first and second session endpoints in different topology subnets are connected to the same GVRN or different GVRNs. Kawakami discloses a VR table, but nowhere does Kawakami disclose that the VR table includes link information that represents determined GVRN connections for such first and second session endpoints.

The Final Office Action concedes on Page 4 that Kawakami "is silent on using the list to select a data transmission path further comprises checking to see if both the first session endpoint and the second session endpoint have connectivity to a common GVRN." However, the Final Office Action then contends that FIGS. 16-18 of Iwata teaches the missing recitations without providing any explanation of where Iwata discloses that a connectivity list with GVRN connection information is used to determine if a two session endpoints are connected to a common GVRN, and when they are then further determining whether selection of the common GVRN as a node in the data transmission path results in an optimal data transmission path.

Moreover, Applicants submit that the motivation to modify Kawakami in view of Iwata appears to be based on "subjective belief and unknown authority", the type of motivation that was rejected by the Federal Circuit in *In re Sang-su Lee*. In other words, the Final Office Action does not point to any specific portion of Kawakami that would induce one of skill in the art, with no knowledge of the claimed invention, to modify the teachings of Iwata to provide each of the recitations of Claim 3 of using a connectivity list that includes GVRN connection information to select a data transmission path by checking to see if both the first session endpoint and the second session endpoint have connectivity to a common GVRN, and, when both the first session endpoint and the second session endpoint have connectivity to a single GVRN, determining whether selecting the common GVRN as a node in the data transmission path results in an optimal data transmission path. Instead, it appears that the Final Office Action gains its alleged impetus to modify Kawakami in view of Iwata by hindsight reasoning informed by Applicants' disclosure, which, as noted above, is not an inappropriate basis for combining references.

For at least these reasons, Applicants submit that the Final Office Action has not provided a *prima facie* case for the obviousness of Claim 3 over Kawakami in view of Iwata. Accordingly, Applicants submit that Claim 3 is patentable over Kawakami in view of Iwata.

Claims 7 and 10 include analogous recitations to Claim 3, and are submitted to be patentable over Kawakami in view of Iwata for at least the reasons provided above.

CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested.

Respectfully submitted,

David K. Purks
Registration No. 40,133

USPTO Customer No. 46589
Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401